

America's Longest War: The Fight over Fluoridation, 1950–

Fluoride, when added to the public drinking water, safely helps to prevent dental cavities. Nevertheless, according to a vocal minority of Americans, fluoridation not only is the work of a “conspiracy of experts” but also causes everything from communism and mongolism to cancer and Acquired Immune Deficiency Syndrome (AIDS). They have won so many local political battles since 1950 that today almost half of the nation’s population remains without the benefits of fluoridated water. Here, historian Donald R. McNeil goes back to the origins of this continuing American controversy.

by Donald R. McNeil

A few things remain constant in America—death, taxes, baseball, and since 1950, widespread, often successful efforts by a passionate minority to keep fluoride out of the public drinking water.

Why has there been such recurring popular resistance to a simple health-care measure of proven benefit to everybody’s teeth?

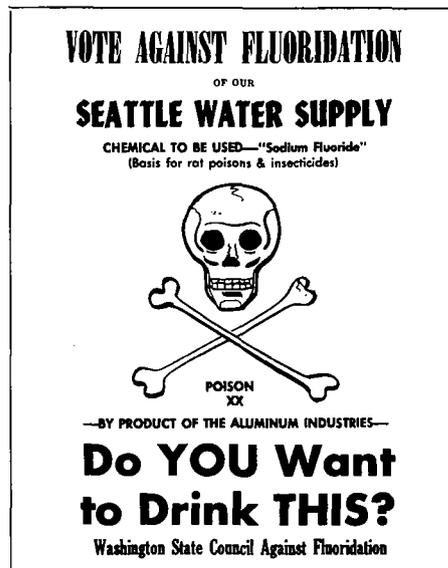
More than 10,000 scientific studies have shown that adding one part per million (ppm) fluoride to water will safely and effectively inhibit tooth decay, particularly if fluoride is consumed during the first nine years of a person’s life.

Yet neither studies nor facts convince a determined, heterogeneous coalition of antifuoridation activists. They have repeatedly challenged the authority of virtually

every major national and international health group—including the American Medical Association, the American Dental Association, the U.S. Public Health Service, and the World Health Organization—and campaigned to keep fluoride out of the country’s water supply.

The results of their agitation are striking: 40 years after fluoride was first introduced into a public water system in Grand Rapids, Michigan, almost half of all U.S. citizens remain without the benefits of fluoridated water.

Citizens somewhere vote on this issue every year. The outcomes of most local referendums are not encouraging to scientists, dentists, and their political allies. Between 1980 and 1983, according to the Centers for Disease Control, fluoridation was



The 1952 Seattle referendum was one of the first big-city defeats for fluoridation. The argument that fluoride is a poison is still used—an argument that ignores the matter of dosage.

approved by 23 communities (such as Kansas City, Missouri; Sheridan, Oregon; Rutland, Vermont) and rejected by 69 (including Springfield, Massachusetts; Wooster, Ohio; Billings, Montana).

On the other hand, there were 468 fluoridation starts during the same three-year period, mostly initiated by city councils or county boards; seven states currently require that public water contain the chemical. But the reversal of such governmental actions by popular referendums (a legacy of the Progressive era in 36 states and the District of Columbia) is not unusual; according to one rough estimate by the National Institute of Dental Research, there have been around 1,500 local popular votes on fluoridation since the early 1950s, with the "antis" winning a majority of them.

Nor is it, as some might imagine, only the smaller cities and towns that reject fluoridation. The citizens of Los Angeles voted it down in 1975, and voters in San Diego, Portland

(Oregon), San Antonio, and Newark have all rebuffed efforts to reduce tooth decay by way of the water supply. Jersey City, New Jersey, a metropolis of some 225,000 residents, is one of the many U.S. municipalities that first adopted fluoridation (in 1974) and then got rid of it in a popular referendum (in 1978).

At the same time, the U.S. surgeon general, Dr. C. Everett Koop, has described tooth decay as one of our nation's "greatest health problems in terms of the number of people affected and its persistence." In terms of dollars, too. According to one estimate by the Centers for Disease Control, the nation's annual bill for dental treatment comes to around \$19.5 billion, roughly half of which is spent on treating tooth decay. There is ample evidence to show that one milligram of fluoride daily reduces a child's cavity count by 50 to 60 percent—at the cost of about 15 to 30 cents per person per year.

Even so, the antis continue to win friends and influence people, baffling

journalists and public officials. Why do the foes of fluoridation keep winning more battles than they lose?

One leader of a successful 1983 dump-fluoridation campaign in Levittown, New York, explained a strong element of the movement's perennial appeal: "We're skeptical of government—we want control over what our children consume." Others claim to be fighting corporate greed. As one Northampton, Massachusetts, voter put it back in 1955, "The chemical industry is for fluoridation, even though it may be dangerous, because they will profit from it." That charge is still heard today.

A Triumph

To some degree, the anti's' success also grows out of a long American tradition of popular hostility to "tampering" with nature. Milk was not pasteurized during the 1920s nor were children immunized against diphtheria and smallpox without an initial public outcry. Chlorine is now routinely added to water supplies in the United States to destroy bacteria responsible for cholera, typhoid, and dysentery, but when the idea was first proposed at the turn of the century, opposition was fierce. More recently, scientists have encountered similar bouts of public anxiety over gene-splicing and artificial heart implants.

What is peculiar about the fluoridation controversy is that it has been going on for 35 years—during an era marked by unprecedented gains in science and medicine. The foes of fluoridation have repeatedly won support from a citizenry supposedly

well informed about matters of health and quick to applaud new medical technology. A 1978 issue of *Consumer Reports* described the persistence of the controversy as "one of the major triumphs of quackery over science."

No to Aluminum

The chronicle of fluoridation begins with a detective story.

In 1901, when Dr. Frederick McKay, a young dentist and recent graduate of the University of Pennsylvania, opened a practice in Colorado Springs, he noticed that many of his patients had permanently stained teeth—a discoloration known locally as "Colorado Stain."

First intrigued, then obsessed, McKay began to look into the matter. One of the first things that he learned was that the stain was so widespread in many Rocky Mountain communities that people took it for granted. But none of McKay's investigations yielded a cause.

Nevertheless, by 1916, after extensive investigation throughout the United States, he felt certain that "something in the drinking water" was the culprit. So intent was he on his search for the cause that he ignored the significance of his own published observation that mottled teeth also showed "a singular absence of decay."

Fifteen more years passed before McKay finally solved the mystery—in Bauxite, Arkansas (population: 1,800). The peripatetic investigator discovered that people in Bauxite born after 1909 had badly

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Dr. Frederick McKay (1874–1959). The fluoridation saga began with his quest for the cause of stained teeth.

stained teeth; those born before 1909 did not. What had happened in 1909? McKay learned that in that year Bauxite changed its water supply, replacing shallow surface wells with three deep wells.

When McKay published his findings in 1931, Bauxite's largest employer, the Aluminum Company of America (ALCOA), took notice. Its managers were then engaged in a battle of words with critics who charged that aluminum cookware was poisonous. ALCOA executives were understandably worried that aluminum would be blamed for stained teeth as well.

After reading McKay's article, H. V. Churchill, ALCOA's chief chemist, ordered that a sample of Bauxite well water be tested for rare elements—elements that would go undetected in the usual water tests. The results showed a relatively high level of fluorine (the gaseous element that, when combined with another element, such

as sodium, constitutes fluoride), 13.7 ppm. On January 20, 1931, 29 years after McKay began his search, Churchill informed him that fluoride was responsible for the stain.

As it happened, a husband and wife research team at the University of Arizona, H. V. and Margaret Cammack Smith, made the same discovery at the same time. Their laboratory tests produced even more conclusive proof of the effect of fluoride than had the ALCOA tests.

The U.S. Public Health Service (USPHS), which had long ignored McKay's pleas for assistance, now assigned an energetic young scientist from its San Francisco office, Dr. H. Trendley Dean, to verify the Churchill and Smith findings.

Throughout the 1930s, Dean amassed statistics from across the country. His "shoe leather surveys" confirmed the correlation between fluoride and mottling. He also found that discoloring began when water contained more than one ppm fluoride.

Testing Grand Rapids

Only gradually did Dean's attention shift to the possible beneficial effects of fluoride. Looking back over his data, he found that children from places where the water contained more than one ppm fluoride did indeed have a lower incidence of dental caries than those from areas with water containing a lower concentration of the chemical. In 1938, he published his findings.

Four years later, Dean and his colleagues established that one ppm fluoride was a safe and effective decay preventive and did not cause mottling.

In 1944, spurred by the work of Dean and McKay, the USPHS decided to launch an experimental program and arranged to add sodium

fluoride to the public water supply in Grand Rapids, Michigan. Nearby Muskegon was selected as the control city—no fluoride would be added to the water there. The city fathers had no objection.

On January 25, 1945, as World War II neared its end, Grand Rapids residents began to drink fluoridated water. They were soon followed by the citizens of Newburgh, New York, of Sheboygan, Wisconsin, and of Marshall, Texas. If fluoridation proved to be safe and effective at the end of these various 10- to 15-year tests, the USPHS intended to urge all communities to add fluoride to their water.

The pioneers of fluoridation were generally a cautious lot. Dean, in particular, thought that communities should at first fluoridate only on a test basis. He and other USPHS officials were caught off guard when a small but enthusiastic group of Wisconsin dentists, encouraged by McKay, challenged the "go-slow" approach.

Trusting the Experts

Led by a vigorous, plain-speaking Madison dentist, John Frisch, and the state dental-health officer, Francis Bull, the Wisconsin group called for immediate action—fluoride to *all* the people, and the sooner the better. The rationale behind their hurry-up campaign was simple: People had been drinking naturally fluoridated water at levels far exceeding one ppm for centuries, and there was no sign that they had ever been hurt by it.

It was fitting that the cry for immediate action should come from Wisconsin. Since the heyday of Senator Robert M. LaFollette, Sr., at the turn of the century, forward-looking academics, lawyers, doctors, and politicians from Wisconsin had be-

come nationally known for their crusades to bring a wide range of public services to the people of their state. The Progressives, as they were called, placed great faith in the authority of the expert. With the help of experts, the Progressives regulated the railroads and utilities, passed laws on civil service, pure food, and tuberculosis control, and created a powerful state board of health.

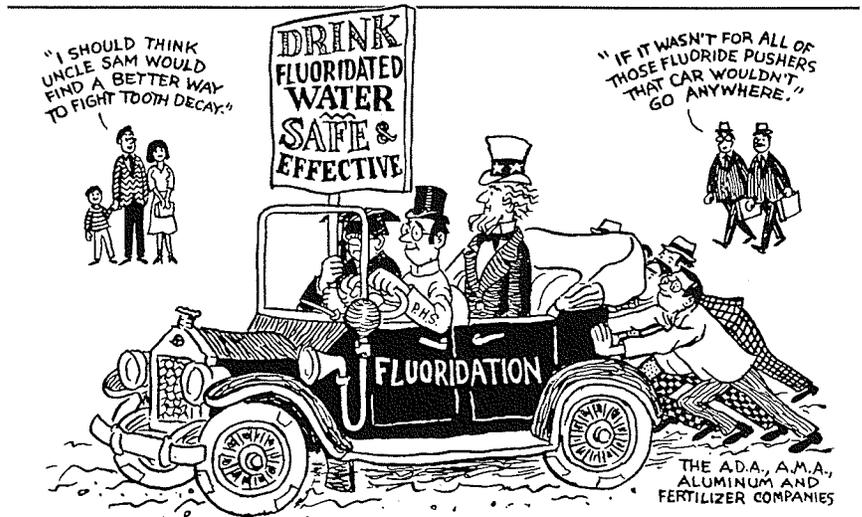
A False Dawn

Frisch, Bull, and the other profluoride dentists were neo-Progressives. The fluoridation of water, they believed, was but another step toward improving the quality of life in Wisconsin.

Not everyone agreed. Even Frisch's own colleagues on the state Fluorine Committee had reservations. "Of course I believe Wisconsin would like to be a pioneer," one colleague wrote, "but we can well afford to go slowly."

Scorning such hesitations, Frisch and his closest allies went ahead with plans for fluoridating all of Wisconsin's public water supplies. From 1946 to 1950, he barnstormed across the countryside, working unstintingly for his goal of "50 by '50"—50 communities fluoridated by 1950. His aggressive style brought victory after victory.

To convince skeptics and to overwhelm the "go-slowers" in Madison, Frisch chartered a bus and took one-third of the city's dentists to Union Grove, Wisconsin, where the water supply contained the optimal one ppm fluoride. The visiting dentists examined the teeth of 500 children and found that they had a decay rate that was only 27 percent that of Madison's children. All the "rabid skeptics" came back "fluorine enthusiasts of the first magnitude," Frisch



later reported.

Frisch's efforts paid off. By January 1, 1950, 50 Wisconsin communities, including Madison, were fluoridating their water.

These successes, coupled with positive reports from Grand Rapids, Michigan, and other trial cities, began to undermine Washington's gossamer position. Even after only four or five years, the results from the experimental communities were showing a remarkable reduction of tooth decay among young children. In the spring of 1950, responding to pressure from the Wisconsin crusaders and others, the USPHS abandoned its earlier position and approved immediate fluoridation for all communities in America. Within a year, the American Dental Association (ADA) and the American Medical Association (AMA) had followed suit.

"Cease firing; the war is over!" Frisch wrote McKay, who was still actively pushing for widespread adoption of fluoridation. But the victory celebrations were premature. The fight was just beginning.

In fact, resistance had begun to

form even before the big health organizations put their imprimatur on fluoridation. In Stevens Point, Wisconsin—one of the towns where Frisch campaigned—the backlash was led by Alexander Y. Wallace, a self-styled "watchdog of the public treasury," local poet, and frequent writer of letters to the editor. His argument: Fluoride was "poison."*

Wallace's zeal and vocal cords matched Frisch's, and largely as a result of his protests, the Stevens Point City Council turned down a proposal to fluoridate in July 1949.

Led by the dentists, the profluoridation forces in Stevens Point (population: 15,000) did not surrender. Enlisting the support of several women's groups, they urged the city council to reconsider. On November 21, 1949, the council did an about-face and authorized fluoridation. Wallace promptly collected the 1,300 signatures necessary to bring the

*The argument, used to this day, ignores the principle of dosage. Only at somewhere between 2.5 and 5 grams per liter would fluoride ions be certainly lethal to an average 154-pound adult.

question to a referendum, and the beleaguered councilmen, having no choice under the law but to accept, scheduled the vote for September 1950. But before the referendum, the council secretly ordered fluoride to be added to the public water. Wallace found out, denounced the council's "underhanded trick," and quickly gained a larger audience.

'Good Bye, Fluorine!'

He then redoubled his efforts. Painting Frisch and company as "foreigners" and faddists, he produced the "expert" testimony of several medical school deans to support his view that fluoridation was still experimental—as, in the eyes of the USPHS, it still was. Adorned with skull and crossbones, his handbills went on to urge the citizens to "Get the Poison out of our Drinking Water."

While Wallace organized mass meetings and rewrote the lyrics of popular tunes to add lift to his campaign ("Good Night, Irene" was changed to "Good Bye, Fluorine!"), Frisch and the women's club campaigners decided to ignore him. They hoped that the facts and reasonable arguments would triumph.

They did not. On September 19, 1950, after what one resident described as the "bitterest fight in the city's history," the citizens of Stevens Point rejected fluoridation by a vote of 3,705 to 2,166.

Wallace's triumph at Stevens Point, well publicized by the national press, soon acquired folkloric status among the opponents of fluoridation. It was their Battle of Bunker Hill, and it demonstrated not only that fluoridation was a political issue but also that a well-orchestrated campaign could defeat the experts.

Before Stevens Point, there was no organized opposition to fluoridation.

There were only scattered cries of alarm from people who (like Wallace) had earlier opposed the pasteurization of milk and other government-imposed health measures.

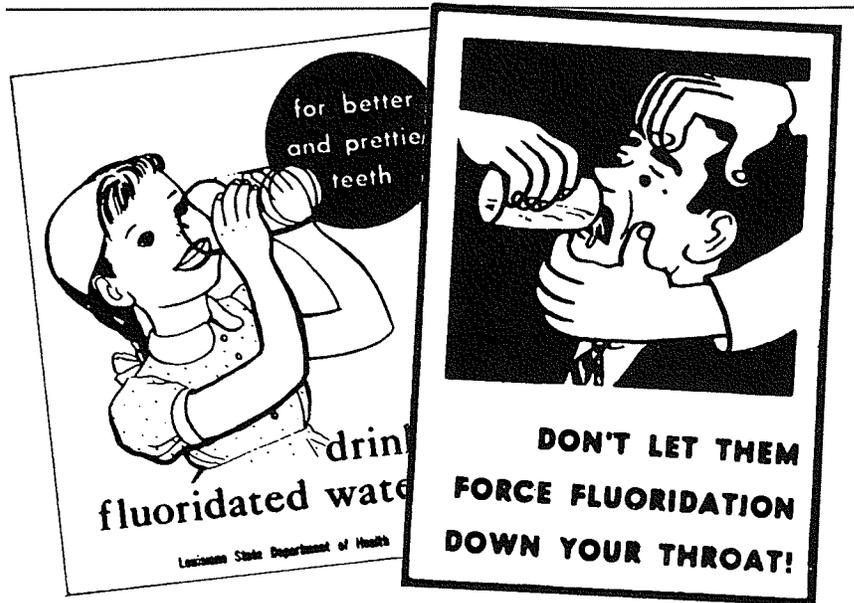
Now, however, national networks began to form. Individuals, including some dentists, chiropractors, natural health advocates, and ordinary "concerned citizens," found allies in such diverse organizations and publications as the John Birch Society, the Ku Klux Klan, the Citizens Medical Reference Bureau (a long-time fighter of immunization), *Prevention* magazine, and the Medical-Dental Ad Hoc Committee on the Evaluation of Fluoridation.

These groups and individuals began sharing information, offering suggestions on tactics, and in other ways (sometimes financial) providing mutual support.

Trouble in Texas

During the earliest days of the struggle, fluoridation opponents sought recruits from the scientific community above all others. Some scientists and physicians actively supported the anti—for a time—while others became unwitting allies of the resistance movement.

Among the latter was Dr. Alfred Taylor, a University of Texas biochemist. In 1950, Taylor began laboratory tests on mice to determine whether sodium fluoride was an anticancer compound. He discovered that while there was no change in the incidence of cancer, mice that drank fluoridated water developed cancer earlier than did other mice. Taylor tried to keep his findings secret, since they were only preliminary, but some of his graduate students could not resist leaking the news. Soon the Associated Press was running the story.



Fluoride converts the primary material in tooth enamel, hydroxyapatite, into more acid-resistant fluorapatite. Opponents call fluoride "forced medication."

More than 20 Texas towns and cities that were on the verge of fluoridating, including Austin, Dallas, and Fort Worth, decided to postpone. "The rumor afforded the opponents, the diehards, and the lukewarms a screen to hide behind," lamented Dr. Edward Taylor, the Texas state dental-health officer (and no relation to the biochemist).

USPHS's Dean went immediately to Austin to investigate. He found that the experiment had been invalid all along. Taylor had not realized that all of the mice—both the experimental and control groups—had been fed Purina laboratory chow that contained a whopping 42 ppm fluoride. But it was too late to kill the notion, by then widely publicized, that fluoride brought on cancer. For decades, Taylor's findings, variously embellished, were used in battles by antis of all persuasions.

Some of the handful of medical men who joined the early opposition saw a cause kindred to others. Dr. Paul Manning, a dentist from Springfield, Massachusetts, had formed the Research 44 Association in 1949 to combat what he viewed as forced experimentation on human beings. Fluoridation was, to Manning, simply a case in point. As testimony to the successes of "godless medical technocrats," he wrote to sympathizers in the early 1950s, "lie Buchenwald and Grand Rapids, Dachau and Newburgh."

Another ally, Dr. George L. Waldbott, a Detroit physician specializing in allergies, began during the mid-1950s to report cases of fluoride poisoning. When he journeyed to Milwaukee to support a petition before the city council to stop fluoridation, the city health commissioner pointed out that Waldbott routinely

made his dire diagnoses without ever seeing his patients.

Waldbott was undaunted by such criticism. In January 1955, he and his wife, Edith, published the first issue of the *National Fluoridation News*, a bimonthly bulletin detailing alleged instances of fluoride-induced illness or new "scientific" evidence against the chemical. The publication quickly became the national bulletin board for antifuoridation information.

Drugs in the Water

The number of doctors and scientists in the opposition has dwindled since the early days of the controversy. But many groups and individuals espousing vitamins, natural foods, and drugless therapy have remained staunch champions of the cause, providing support for other antis involved in local referendum battles.

An early champion was Royal Lee of Milwaukee, Wisconsin, long an enemy of government intervention in matters of health. In 1933, the Food and Drug Administration declared that his Vitamin Products Company, which marketed vitamins and patent medicines nationwide, was making false and fraudulent claims for one of its products. Six years later, a federal court found Lee guilty of violating the Food and Drug Act by making "false and misleading" statements about his product. In 1945, the Federal Trade Commission ordered him to stop disseminating "false properties of medicinal preparations."

Despite these setbacks, Lee prospered. With some of his wealth, he established in Milwaukee the Lee Foundation for Nutritional Research. This nonprofit foundation was dedicated, in Lee's words, to protecting the public against "vi-

cious commercial interests" that were busy "selling the public down the river." Besides fluoridation, Lee fought the sulfa drug "racket" and, echoes of the battle in Bauxite, the use of aluminum cooking utensils. Lee died in 1971, after a life of affluence and vigorous activism.

Perhaps the most widely known of all the so-called natural scientists was Dr. Charles Betts of Toledo, Ohio. Though he never graduated from dental school, he was a licensed dentist—and another ardent foe of aluminum. As fluoridation spread, Betts began stumping the country in support of its local opponents. Denouncing proponents as "checkbook charlatans" who "spew forth their Munchausen scientific muck," he asked his audiences if they wanted "those Mexicans, Negroes, and Puerto Ricans in your water department" to put "drugs in your water."

The International Chiropractic Association, with its headquarters in Davenport, Iowa, became a center for the dissemination of antifuoridation data. At odds with the medical profession as much as with fluoridation, chiropractors have remained powerful local leaders of the movement.

Mass Medication?

Ever since the late 1940s, the fluoridation question has been sporadically linked to other social and political issues. Religious freedom is one.

In 1951, John Benediktson, the president-elect of the California Dental Association, complained that local dental societies urging fluoridation had "run into local opposition from Christian Scientists." The ADA sent a delegation to the Christian Science Church headquarters in Boston to determine its official position. The church leaders said they had de-

FLUORIDATION AROUND THE WORLD

Compared with most other countries in the world, America, despite all the controversy, is well down the road to widespread fluoridation. Only Australia and Ireland, with, respectively, two-thirds and three-fifths of their populations drinking fluoridated water, are ahead of the United States. Twenty-nine other nations have taken steps to follow suit. Roughly 12 percent of the population of Great Britain drinks fluoridated water, and Canada comes close behind the United States, with over one-third of its population drinking fluoride-treated water. The extent of fluoridation in the Soviet Union and the East European states is unknown, but their governments all officially endorse the practice. Meanwhile, West European countries and Japan remain very far behind, with only a few trial runs to their credit; and fluoridation ranks low among the preoccupations of the Third World.

cided to leave the matter "more or less to local determination."

But local determinations have varied. During the 1950s and '60s, many of the state committees of the church vigorously campaigned against what members felt was forced "mass medication." Some sued for relief. When one case came to trial in Missouri in 1961, the state's supreme court ruled that fluoride was not a medication but a trace element found naturally in food and water. It was added only where there was an insufficient concentration to prevent cavities. On these grounds and others, the constitutionality of fluoridation has been upheld.*

The antifuoridation forces have also enlisted a number of less benign allies. During the 1950s, Golda Franzen, a San Francisco housewife, became the leading exponent of the idea that fluoridation was a "Red conspiracy." She predicted that fluoridation would produce "mo-

ronic, atheistic slaves" who would end up "praying to the Communists." Franzen's warnings, echoed by such groups as the John Birch Society and the Ku Klux Klan, acquired particular salience during the anti-Communist fevers of the McCarthy era.

For his part, C. Leon de Aryan, editor of an anti-Semitic publication in San Diego, described the spread of fluoridation as a plot to "weaken the Aryan race" by "paralyzing the functions of the frontal lobes."

Heterogeneous though they were, the various opponents of fluoridation proved to be surprisingly effective right from the start.

In Seattle, Washington, in 1951, for example, the antifuoridation committee drew support from Christian Scientists, a few dentists, health food operators, and fervent anti-Communists. Another set of allies, the chiropractors, publicized fluoride's alleged deleterious effects—tumors, brittleness of bones, oily sweat, undue financial anxiety, loss of memory, and nymphomania. The antis won, 84,000 to 44,000.

This drama in Seattle was to be repeated, time and again, all over the

*Although antifuoridationists frequently resort to lawsuits, no court of last appeal has ruled in their favor on health grounds. The U.S. Supreme Court has consistently refused to review fluoridation cases.

nation. Even after the 10-year tests in Grand Rapids and Newburgh were completed in 1955, with favorable results, the resistance movement continued (though with fewer and fewer respectable scientists behind it).

An article in the February 1955 *Scientific American* offered an explanation. The authors, Bernard and Judith Mausner, had surveyed the voters in Northampton, Massachusetts, where fluoridation had just been defeated by a 2-to-1 margin. They found that opposition votes came mostly from the elderly, people without children under 12, and people in the lower income brackets. Most of the opponents they interviewed had failed to finish high school.

The Mausners concluded that the outcome resulted largely from growing anti-intellectualism and the

“current suspicion of scientists, a fear of conspiracy, the tendency to perceive the world as menacing.”

Populism?

Such suspicions and fears have continued to help the opposition forces win a clear majority of the fluoridation referendums in America ever since. To be sure, the rhetorical emphasis has shifted with the times. During the Vietnam War and the Watergate trials, distrust of authority became a popular opposition theme. Among other vogues and trends to which the antifuoridationists lately have attached themselves are the back-to-the-soil movement, the “organic” and “natural” food fads, environmentalism. And during the late 1970s, the increased use of local and statewide referendums and the rise of single-issue interest-group activity (concerned with everything from taxes to abortion) gave weight and legitimacy to what many journalists now saw as the “populist” tactics of the antis.

During the last 10 years, new anti-fluoridation leaders have come onto the national scene. None of them is more effective or widely known than John Y. Yiamouyiannis, a Connecticut-born biochemist educated at the University of Chicago and the University of Rhode Island. In 1974, Yiamouyiannis was hired as the science director of the National Health Federation. Based in Monrovia, California, this enterprise has, during its short but vivid history, backed such remedies as electrical therapy (given to patients diagnosed by mail) and laetrile. In a 1963 news release, the federal Food and Drug Administration described the federation as a “front for promoters of unproven remedies, eccentric theories, and quackery.”



John Yiamouyiannis, the reigning anti-fluoridation leader, has also come out against chlorinated water.

Long an opponent of polio vaccination and the pasteurization of milk, the federation hired Yiamouyiannis to take on fluoridation.

The doctor more than earned his keep. Traveling throughout America and around the world, he appeared on TV and radio talk shows, helped to frame local lawsuits to halt fluoridation, and claimed to have established links between fluoride and cancer.

Victory in Los Angeles

One of his signal victories, aided by chiropractors, health food advocates, and radical environmentalists, was the defeat of fluoridation in the 1975 Los Angeles referendum. The studies he cited there—demonstrating what he alleged was a higher than average cancer rate in fluoridated communities—were examined by the Centers for Disease Control, the National Cancer Institute, and the National Academy of Sciences and found to be insubstantial. According to one reviewer, the studies were more in the nature of a “propaganda flyer than a serious scientific effort.”

Nevertheless, many Los Angeles voters were swayed by evidence manufactured (or sometimes selectively culled from reputable scientific sources) by Yiamouyiannis and his allies. Two prominent state legislators, Art Torres and Richard Alatorre, turned against the measure when they were told that a World Health Organization (WHO) study found that the tooth enamel of the malnourished was more susceptible to mottling. (They were not told that WHO endorses fluoridation or that the study was dealing with famine conditions.) The verdict of the legislators weighed heavily. The antis won handily in Los Angeles, by a



Fluoridation, antis charge, is another costly “big government” scheme.

vote of 213,573 to 166,549.*

After a dispute with the president of the National Health Federation, Yiamouyiannis was fired in 1979. He promptly launched his own organization, the Center for Health Action, in Delaware, Ohio.

From his new base, Yiamouyiannis went on to establish himself as the antis’ reigning oracle on fluoridation. In his recent book, *Fluoride: The Aging Factor* (1983), he charged that fluorides attacked the body’s own immunity system and were responsible for colds, premature aging, arthritis, birth defects, and, inevitably, cancer.†

*In California, the antis are particularly zealous; only 17 percent of the state’s population is served by fluoridated water supplies.

†To those unable to flee from fluoridated communities, Yiamouyiannis offered a line of water distillers, ranging in price from \$449 to \$1,149. All, he said, removed fluoride, as well as other “harmful inorganic contaminants,” from the water.

Last year, attuned to current events, Yiamouyiannis announced from Ohio that fluoride caused AIDS—a diagnosis echoed by Dr. John Lee, a Marin County, California, physician active in the West Coast antifuoridation movement.

Jim Jones Kool-Aid

Apart from a few new faces and a few new variations on old themes, little has changed in the antifuoridation movement since the late 1950s. The *National Fluoridation News* continues to come out four or five times a year, although it is now edited by one Edith Fabian in Gravette, Arkansas. The Ku Klux Klan currently seems to have other preoccupations, but chiropractors and health food enthusiasts continue to enlist in the cause, no less zealous than those partisans of yesteryear.

A 1983 battle in Springfield, Massachusetts, makes this clear.

Proponents of the measure included all the respectable local and national health organizations, the Jaycees, the League of Women Voters, the American Legion, and other civic groups. The antifuoridation group, the Save Our Water Committee of Springfield, was chaired by Susan Pare, a former high school science teacher, and had the enthusiastic backing of the Massachusetts Communities for Pure Water, led by a Springfield chiropractor named Stephen Dean. In public meetings, TV debates, letters to the editor, and a blizzard of handbills, the energetic antis managed to associate fluoridation with everything from Three Mile Island to Jonestown to Love Canal. At a public hearing, one opponent warned his fellow citizens against putting "Jim Jones Kool-Aid in our water supply."

The news media, including the

Springfield *Daily News* and the local television stations, supported fluoridation, but they let the antis have their say. The *Daily News's* editors looked into some of the opposition charges and found them false. But the barrage of alarms and accusations from the antis was so steady that it was difficult for the paper, or any of the local media, to check everything. So they didn't.

Another factor worked in favor of the antis: the reluctance of the mayor (until just before the vote, when he quietly came out in favor) and of most Springfield city council members to take a public stand on the measure. That shyness has, with a few exceptions, been the rule among American local politicians ever since the earliest days of the controversy. Fluoridation's foes are far more passionate than its supporters; endorsing fluoridation is likely to cost a politician more popularity than he gains.

Paying the Price

Expecting reason to prevail in central Massachusetts, the League of Women Voters and other fluoridation supporters were stunned when the votes of the November 8, 1983, referendum were tallied. With a voter turnout of nearly 50 percent, 17,313 people voted against, and 7,535 for, fluoridation.

Did the 1955 Mausner profile of typical opposition voters—ill-educated, low-income folk—hold for the Springfield election? Not at all. Paul Robbins, a political consultant hired by the profluoridation forces, found that anti voters came from all social and economic classes and all educational levels. "The better educated people tended to be swayed by the freedom of choice argument," said Robbins. "The pseudoscientific

scare material worked better on the less well educated. But even bright, informed people were affected by the atmosphere of uncertainty created by the rabid antis."

Sister Caritas, the head of a local hospital and a fluoridation backer, offered her own explanation: "I just don't think people are aware that there is a serious dental disease problem."

Indeed, across America, according to a 1984 survey by the Opinion Research Corporation, only two percent of those polled mentioned fluoride as an important factor in the prevention of cavities. The survey also revealed a probable cause of this surprising ignorance: Despite the ADA's stand, most dentists, when talking to patients, tend to stress general hygiene over the benefits of fluoridation. This means that the public's most authoritative sources of dental information, the family dentists, do little to make people aware of what they have to lose if fluoridation is defeated in their communities.

In fluoridation, as in space exploration, the United States is a leader; but it is unlikely that the USPHS's

goal, set in 1950, of fluoridated water for all Americans will soon be achieved.

The reason is simple. The fluoridation question is almost tailor-made for endless controversy in a free-wheeling democratic society. Fluoridation, unlike chlorination, is not a life-or-death matter. Its scientific rationale has little emotional appeal. When it comes to a vote, fluoridation is largely a symbolic issue. Arrayed against its adoption have been, and always will be, not only the fanatics, the fearful, and the vendors of snake oil but also a goodly proportion of those Americans who simply distrust authority, government, science. Those people will not go away, nor, in all respects, would the nation be better off if they did.

As long as the issue is left to local determination, Americans should expect the fluoridation controversy, in all its bizarre and time-honored variations, to crop up in their towns and cities for many decades. This is one of the prices—not the dearest, but not the smallest, either—that Americans pay for having the kind of open political system they do.