

PUBLIC DECEPTION ON FLUORIDE

It is almost a cliché that most industrial corporations are responsible only to their shareholders and dedicated to showing a profit. They are amoral in that they often feel little or no obligation to safeguard the health of their workers, the general public, or the environment unless compelled to comply with laws that are designed for this purpose and are enforced. Deception supported by suppression of adverse health effects, distorted science carried out by “captive” researchers, and collusion with or corruption of government agencies are made legitimate if doing otherwise would hurt the “bottom line.”

During the last century, this kind of cover-up and deception of major market products has been exposed with asbestos, leaded gasoline, and the tobacco industry. An impressive new book adds fluoride to the list.

In *The Fluoride Deception*^a Christopher Bryson, a prize-winning investigative reporter and producer of television documentaries, reveals how the “protected pollutant” status of fluoride and the role of fluoridation to project a benign image of fluoride have been used to counter threats of litigation from its harmful effects to people and the environment. Consulting a wide array of pertinent literature and declassified letters and documents dating to World War II and using extensive interviews with surviving principals, Bryson brings to light critically important studies that had been buried for decades. His research and consummate writing skill bring to light the shocking story of more than six decades of fluoride cover-up and deception.

Recounting earlier episodes of fluoride pollution and environmental fluoride hazards, especially in connection with the aluminum industry, Bryson dates the beginning of major action on the fluoride problem to 1944 and the Manhattan Project, the code name for the secret effort to create the world’s first atomic bomb. This undertaking required enormous amounts of uranium hexafluoride for separation of fissionable uranium-235 from the more abundant and stable uranium-238. During these and related operations, dangerously high levels of fluorides were emitted in the factories and to the surrounding areas. Declassified memos from this period reveal major concerns about possible adverse health effects of fluorides in the workplace and regional agricultural damage. Accidents, some of them fatal, were covered up. Neurological effects among workers were suspected, and animal studies were recommended but may not have been carried out.

^aBryson, Christopher. *The Fluoride Deception*. Seven Stories Press, 140 Watts Street, New York, NY 10013. xxv + 374 pages, including index. US \$24.95, Canada \$37.95, UK £17.99. <http://www.sevenstories.com>

The US military and industrial operations producing and releasing fluorides saw themselves facing massive litigation for damages to human health both in the workplace and the neighboring agricultural areas. In response, the Fluorine Lawyers Committee was formed to represent key companies: the Aluminum Company of America (Alcoa), the Aluminum Company of Canada (Alcan), Kaiser Aluminum, Reynolds Metals, US Steel, and others.

With its enormous prestige and influence, the industry-funded Kettering Laboratory at the University of Cincinnati in Ohio endeavored to protect these interests. Headed by Dr Robert A Kehoe, who had successfully assisted in defending the use of lead in gasoline, the Kettering Laboratory conducted vitally important fluoride studies which Bryson discovered buried in the library archives. An especially significant but unreported 1958 study revealed a direct relationship in dogs between exposure to fluoride at approved workplace levels and the serious lung disease emphysema that was being denied as a legitimate workplace injury. The study, which was originally expected to demonstrate safety, was suppressed. If it had been released when first carried out, it might have resulted in lowering of permissible fluoride levels and saved lives.

A key leader in protecting against lawsuits was Dr Harold C Hodge of the University of Rochester, who was considered America's foremost expert on the toxicology of fluoride. As a principal medical adviser to the Manhattan Project, he played a major role in manipulating studies to favor safety and minimize harm. He also had a history of conducting human experimentation such as the injection of plutonium into patients without their consent. In his eminent position he wielded enormous influence over the National Academy of Sciences (NAS) and the fluoride publication policies of important scientific journals. In a May 1946 memo to Colonel Stafford L Warren, head of the medical section of the Manhattan Project, Hodge suggested that it might be a good strategy to spread the word about the benefits of fluoride to children's teeth in order to allay concerns of farmers in New Jersey who had lost their peach orchards from du Pont's fluoride emissions.

Earlier, the perceived need to create a positive image for fluoride gave birth to the 1945 Newburgh Kingston Fluorine Caries Demonstration Project. This first experiment with water fluoridation, along with that in Grand Rapids, Michigan, appears to have been established to meet two objectives: to show that fluoride is safe in low doses to reduce tooth decay and, secretly, to study the health of the children over a ten-year period for evidence of adverse effects.

This effort to put a benign face on fluoride to head off litigation was originally suggested in 1939 by Gerald J Cox of the Mellon Institute in Pittsburgh, Pennsylvania, created by Andrew W Mellon, founder of US Steel and later

Secretary of the US Treasury. In the late 1930s and early 1940s, the US Public Health Service (USPHS) as well as the American Medical Association and the American Dental Association (ADA) opposed fluoridation on the grounds of its uncertain toxicity beyond dental fluorosis. However, in 1950 the chief regulating body, the USPHS, gave general approval to fluoridation, and many professional organizations quickly followed suit. Bryson notes, as have others, that the appointment of Oscar R Ewing as head of the Federal Security Agency then in control of the USPHS may be relevant. Ewing was a former lawyer for Alcoa and a fund-raiser and acquaintance of President Harry S Truman, who appointed him to the position.

In the course of his research, Bryson also uncovered evidence that Dr H Trendley Dean, hailed in public health circles as the “father of fluoridation” upon whose epidemiological studies the theory of dental “benefits” was based, initially opposed fluoridation in view of serious deficiencies in his own research and the potential for adverse health effects. However, Dean was persuaded to relent, and for his about-face, he was amply rewarded and appointed the first Director of the National Institute of Dental Research (NIDR) and later moved to a senior position with the ADA. Once professional opposition was overcome, the selling of fluoridation to the public was aided by the services of Edward L Bernays, often called “the father of public relations,” who had been hired earlier by the tobacco industry to persuade women to take up smoking.

Contrary to prevailing propaganda, fluoridation is based on flawed studies, not sound science. Properly conducted surveys show that tooth decay in areas with fluoridation is not significantly lower than in areas without fluoridation. Simply put, the continued promotion of fluoridation fosters and maintains an insidious deception.

Bryson also describes how fluorosilicic acid (H_2SiF_6) became the prime source of fluoride for municipal water fluoridation. Although a much less convenient source for the large industrial need for hydrogen fluoride (HF) than fluorspar (or fluorite, CaF_2), this by-product from the production of phosphate fertilizer from fluoroapatite ($\text{Ca}_{10}(\text{PO}_4)_6\text{F}_2$) is obtained by scrubbing the effluent stacks of phosphate fertilizer plants, especially in Florida. As an “incentive,” the “surplus” fluorosilicic acid, which otherwise has only a very limited industrial market, is sold for use in fluoridation, even though it is contaminated with arsenic, lead, and radionuclides. Money earned thereby defrays the cost of collecting it. Major savings are achieved from not having to comply with laws that require the material be treated as “toxic waste” forbidden for disposal in the marine environment or on land without the use of elaborate and costly storage areas.

Making full use of his engaging literary skill, Bryson opens *The Fluoride Deception* with a moving account of the tragic ordeal of Dr Phyllis J Mullenix who, like others, was discharged from her position and robbed of her career when she dared to publish results of a study contradicting the prevailing view about the safety of fluoridation. Her investigation, published in 1995, demonstrated a link between fluoride exposure and abnormal behavior in rats caused by neurological damage.

Dr Mullenix had been brought to the Forsyth Dental Center in Boston from the Department of Psychiatry of the Harvard Medical School to head up a new department of toxicology. At Forsyth she was requested to study the neurotoxicology of fluoride in rats by the ultra-sensitive computer pattern recognition system she had developed with Dr William J Kernan of Iowa State University and had begun using at Harvard. The results of the study by Mullenix and her co-workers amply confirmed the concerns about adverse effects of fluoride on the central nervous system expressed some fifty years earlier by Dr Hodge. Ironically, Hodge, who in his retirement was a consultant at Forsyth, was often present in Mullenix's laboratory during the time of her study without disclosing his suspicions expressed in 1944.

In contrast to the perfidious behavior of Dr Hodge and Dr Kehoe stands the the inspiring and reassuring but all-too-brief life of Dr Kaj E Roholm, the legendary Danish pioneer of fluoride research. Roholm thoroughly investigated the adverse effects of fluoride on cryolite workers in Denmark in the 1930s and subsequently did not agree with US health officials in their sanguine assessment of fluoride effects on bones in the US. In a later chapter Bryson cogently summarizes the very important clinical findings on reversible intoxication from fluoridated water by Dr George L Waldbott, founder of the International Society for Fluoride Research and the journal *Fluoride*.

With equally impressive skill, Bryson devotes two chapters to the "killer fog" disaster that struck Donora, Pennsylvania in October 1948. Using the words of the survivors, he vividly describes the deplorable conditions that led up to the disaster and the suffering it incurred. He then lays bare the attempts to deny the role of fluoride by collusion between the official investigators from USPHS, the Kettering Laboratory, and the Mellon Institute to suppress the independent findings by chemist Dr Philip Sadtler of high levels of fluoride in the bodies of victims.

Previous authors have presented the idea of a deception, if not an outright conspiracy involving fluoride. What makes Bryson's book unique is that it is an up-to-date account supported by indisputable new evidence in the form of declassified correspondence and exhumation of buried studies. To top it off, *The Fluoride Deception* presents its case in such a brilliant way and with such literary skill that it stands a good chance of becoming a cause célèbre for the

general public to protest and demand action. A top priority must be placed on “taking back” such public institutions as NAS, EPA, and USPHS in order to serve the needs of the public rather than those of industry. Although the book deals primarily with the situation in the US, it is equally germane to other countries such as Canada, Australia, Ireland, and the UK. *The Fluoride Deception* is extraordinarily well crafted and is presented in a manner that it is bound to hold the interest of both the professional and the general reader. Even the extensive Notes and annotated citations of the literature are engaging and rewarding to read.

In summary, *The Fluoride Deception* reveals how various fluoride-emitting industries have created and maintained a gigantic deception for more than six decades. Their primary objective has been to stave off the threat of litigation from workers and others harmed by fluoride. In their view, protection of the all-important financial “bottom line” serves to justify the use of dubious and unsavory techniques including suppression of adverse studies, distorted science, career assassination, and even collusion with government agencies. Bryson’s outstanding presentation throws the spotlight on how both the public and the scientific community have been deceived about fluoride in general and fluoridation in particular.

With a foreword by Dr Theo Colborn, coauthor of *Our Stolen Future*,¹ and a postscript by Dr Arvid Carlsson, Nobel Laureate for Physiology or Medicine in the year 2000, *The Fluoride Deception* can be read with confidence and perceived as a credible, stirring call for immediate action.

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REFERENCE

- 1 For review and comment, see Foulkes RG. *Fluoride* 1996;29(4):227-36.